

IN THE CLAIMS

The following slate of claims represents the present status of all claims in the application including claims currently amended.

1-69 (Cancelled).

70 (Currently Amended). A propellant composition comprising a reduced energy binder, an oxidizer, and a fuel wherein

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- (a) said reduced energy binder includes a high molecular weight polyester polyol binder polymer including an amount of cured poly(1, 4-butanediol adipate) having a molecular weight (M_{w_n}) above 4000 (uncured) and cured using an isocyanate curing agent, and an amount of one or more energetic plasticizers wherein the plasticizer to polymer ratio is less than 1.6:1;
 - (b) said oxidizer consists of a material selected from the group consisting of ammonium perchlorate and a mixture of ammonium perchlorate and sodium nitrate, and
 - (c) said fuel is aluminum.

71 (Previously Presented). A propellant composition as in claim 70 wherein said reduced energy binder further comprises an amount of inert plasticizer material.

72 (Previously Presented). A propellant composition as in claim 71 wherein said inert plasticizer is triacetin.

73 (Currently Amended). A reduced energy binder propellant

composition as in claim 70 wherein the one or more energetic plasticizers are selected from the group consisting of nitrate esters of the group consisting of n-butyl-2-nitratoethyl nitramine; trimethylolethane trinitrate; triethyleneglycol dinitrate; butanetriol trinitrate; nitroglycerin and combinations thereof.

41 Cont.

74 (Currently Amended). A ~~reduced energy binder~~ propellant composition as in claim 71 wherein the one or more energetic plasticizers are selected from the group consisting of nitrate esters of the group consisting of n-butyl-2-nitratoethyl nitramine; trimethylolethane trinitrate; triethyleneglycol dinitrate; butanetriol trinitrate; nitroglycerin and combinations thereof.

75 (Currently Amended). A ~~reduced energy binder~~ propellant composition as in claim 72 wherein the one or more energetic plasticizers are selected from the group consisting of nitrate esters of the group consisting of n-butyl-2-nitratoethyl nitramine; trimethylolethane trinitrate; triethyleneglycol dinitrate; butanetriol trinitrate; nitroglycerin and combinations thereof.

76 (Currently Presented). A ~~reduced energy binder~~ propellant composition as in claim 73 wherein the plasticizer is selected from the group consisting of nitroglycerin, n-butyl-2-nitratoethyl nitramine, trimethylolethane trinitrate and combinations thereof.

77 (Currently Amended). A ~~reduced energy binder~~ propellant

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composition as in claim 74 wherein the plasticizer is selected from the group consisting of nitroglycerin, n-butyl-2-nitrotoethyl nitramine, trimethylolethane trinitrate and combinations thereof.

78 (Currently Amended). A ~~reduced energy binder~~ propellant composition as in claim 75 wherein the plasticizer is selected from the group consisting of nitroglycerin, n-butyl-2-nitrotoethyl nitramine, trimethylolethane trinitrate and combinations thereof.

79 (Previously Presented). A propellant composition as in claim 78 wherein the plasticizer is trimethylolethane trinitrate.

80 (Currently Amended). A propellant composition as in claim 70 wherein the poly (1, 4-butanediol adipate) has a molecular weight (MW_n) above 6,000 (uncured).

81 (Currently Amended). An improved high solid propellant composition comprising by weight:

- (a) about 10% cured poly(1, 4-butanediol adipate) having a molecular weight (Mw_n) ≥6000 (uncured) and cured using an isocyanate curing agent;
- (b) about 11% nitroglycerin plasticizer;
- (c) about 2.5% triacetin plasticizer;
- (d) about 22% aluminum; and
- (e) about 53% ammonium perchlorate oxidizer.

82 (Currently Amended). An improved high solids propellant

composition comprising by weight:

- (a) about 7% cured poly(1, 4-butanediol adipate) having a molecular weight, M_{W_n} ≥ 6000 (uncured) and cured using an isocyanate curing agent;
- (b) about 6.5% n-butyl-2-nitrotoethyl nitramine;
- (c) about 1.4% triacetin;
- (d) about 22% aluminum;
- (e) about 60% ammonium perchlorate; and
- (f) about 2% dicyandiamide.

83 (Currently Amended). An improved high solids propellant composition comprising by weight:

- (a) about 11% cured poly(±1, 4-butanediol adipate) cured from a tetramethylene adipate prepolymer having a molecular weight, M_{W_n} of about 6,000 (uncured) and cured using an isocyanate curing agent;
- (b) about 12% plasticizer selected from the group consisting of nitroglycerin and trimethylolethane trinitrate and combinations thereof;
- (c) about 22% aluminum; and
- (d) about 53% ammonium perchlorate.

84 (Currently Amended). An improved high solids propellant composition comprising by weight:

- (a) about 11.3% cured poly (1, 4-butanediol adipate) cured from a tetramethylene adipate prepolymer, M_{W_n} of

about 6,200 (uncured) and cured using an isocyanate curing agent;

- (b) about 12.2% nitroglycerin plasticizer;
- (c) about 22% (30 μ) aluminum; and
- (d) about 53% (200 μ) ammonium perchlorate oxidizer.

85(Previously Presented). The propellant composition of claim 83 wherein (d) comprises about 30% ammonium perchlorate and about 22% sodium nitrate.
